

Release Notes

hp StorageWorks Edge Switch

Product Version: FW V05.02.00-13
HAFM Notebook SW V07.01.00-09
HAFM 1U Appliance SW V07.02.00-09

Fourth Edition (December 2003)

Part Number: AA-RTDZD-TE/958-000284-004

These Release Notes contain late-breaking and supplemental information for the HP StorageWorks Edge Switch 2/24 and Edge Switch 2/32.

For the latest version of these Release Notes and other edge switch documentation, access the HP storage website at: <http://www.hp.com/country/us/eng/prodserv/storage.html>.



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Edge Switch Release Notes
Fourth Edition (December 2003)
Part Number: AA-RTDZD-TE/958-000284-004

About this Document

These Release Notes contain late breaking and supplemental information for the HP StorageWorks Edge Switch 2/24 and Edge Switch 2/32.

Be sure to read these Release Notes before installing an edge switch. This information is periodically updated and available on the World Wide Web at: <http://www.hp.com/country/us/eng/prodserv/storage.html>.

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Release Notes Information

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Intended Audience

This document is intended for customers who purchased the HP StorageWorks Edge Switch 2/24 and Edge Switch 2/32.

Firmware Version 05.02.00-13

Firmware Version 05.01.00-24 is the initial firmware released with the Edge Switch 2/24 and Edge Switch 2/32. A copy of the latest version of the firmware, 05.02.00-13 (as of this date), is contained on the *HP StorageWorks Edge Switch Documentation and Firmware CD* (Part Number 524-000001-003). The latest firmware is also available on the HP website at:

<http://www.hp.com/country/us/eng/prodserv/storage.html>.

You need to upgrade Version 05.01.00-24 to Version 05.02.00-13 if Version 05.02.00-13 is not preloaded on the edge switch. For more information on upgrading firmware versions, refer to the appropriate *HP StorageWorks Edge Switch Service Manual*. The features of this firmware version are detailed in the accompanying manuals.

Other Edge Switch Documentation

The documentation contained on the HP StorageWorks Edge Switch Documentation and Firmware CD (Part Number 524-000001-003) was previously released with firmware Version 05.01.00-24. The documentation applies to firmware Version 05.01.00-24 and Version 05.02.00-13.

In addition to these Release Notes, HP provides the corresponding information listed below:

- *HP StorageWorks Edge Switch 2/24 Rack Mount Kit Installation Instructions, AA-RTDGC-TE/958-000285-002*
- *HP StorageWorks Edge Switch 2/24 Flexport Upgrade Instruction, AA-RTDHB-TE/958-000286-001*
- *HP StorageWorks Edge Switch 2/24 Installation Guide, AA-RTDWB-TE/958-000283-001*
- *HP StorageWorks Edge Switch 2/24 Service Manual, AA-RTDXB-TE*
- *HP StorageWorks Edge Switch 2/24 Product Manager User Guide, AA-RTDYB-TE*

- *HP StorageWorks Edge Switch Rack Mount Kit Installation Instructions, AA-RT4MC-TE/958-000293-001*
- *HP StorageWorks Edge Switch 2/32 Flexport Upgrade Instruction, AA-RS33C-TE/958-000291-001*
- *HP StorageWorks Edge Switch 2/32 Installation Guide, AA-RSTZC-TE/958-000290-001*
- *HP StorageWorks Edge Switch 2/32 Service Manual, AA-RS2GC-TE*
- *HP StorageWorks Edge Switch 2/32 Product Manager User Guide, AA-RS2HC-TE*
- *HP StorageWorks CLI Reference Guide for Directors and Edge Switches, AA-RQ7AD-TE*
- *HP StorageWorks SNMP Reference Guide for Directors and Edge Switches, AA-RQ7BD-TE*
- *HP StorageWorks SAN High Availability Planning Guide, AA-RS2DC-TE*
- *HP StorageWorks SAN Design Guide, AA-RMPNJ-TE*
- *HP StorageWorks Embedded Web Server User Guide, AA-RTDRB-TE*
- *HP StorageWorks HA-Fabric Manager User Guide, AA-RS2CD-TE*
- *HP StorageWorks HAFM Server for Windows 2000 Installation Guide, AA-RT4KC-TE*
- *HP StorageWorks HA-Fabric Manager Server Installation Guide, AA-RU5FA-TE/958-000324-000*
- *HP StorageWorks HA-Fabric Manager Release Notes, AA-RUR6B-TE/958-000288-006*
- *HP StorageWorks Director and Edge Switch Glossary, AA-RU5JA-TE*

CD-ROM Directory Structure

The *HP StorageWorks Edge Switch Documentation and Firmware CD* contains the following items:

CD-ROM Directory Structure for Edge Switch 2/24 and Edge Switch 2/32 Documentation

- Manuals.pdf – (HP StorageWorks Edge Switch 2/24 and Edge Switch 2/32 Documentation; links to all documents below and search function)
- Docs
 - README.TXT – (HP Doc Structure; late breaking doc changes)
 - AA-RTDWB-TE/958-000283-001 – (HP StorageWorks Edge Switch 2/24 Installation Guide)
 - AA-RTDXB-TE – (HP StorageWorks Edge Switch 2/24 Service Manual)
 - AA-RTDYB-TE – (HP StorageWorks Edge Switch 2/24 Product Manager User Guide)
 - AA-RSTZC-TE/958-000290-001 – (HP StorageWorks Edge Switch 2/32 Installation Guide)
 - AA-RS2GC-TE – (HP StorageWorks Edge Switch 2/32 Service Manual)
 - AA-RS2HC-TE – (HP StorageWorks Edge Switch 2/32 Product Manager User Guide)
 - AA-RQ7AD-TE – (HP StorageWorks CLI Reference Guide for Directors and Edge Switches)
 - AA-RQ7BD-TE – (HP StorageWorks SNMP Reference Guide for Directors and Edge Switches)
 - AA-RS2DC-TE – (HP StorageWorks SAN High Availability Planning Guide)
 - AA-RMPNJ-TE – (HP StorageWorks SAN Design Guide)
 - AA-RS2CD-TE – (HP StorageWorks HA-Fabric Manager User Guide)
 - AA-RTDRB-TE – (HP StorageWorks Embedded Web Server User Guide)
 - AA-RT4KC-TE – (HP StorageWorks HAFM Server for Windows 2000 Installation Guide)
 - AA-RU5FA-TE/958-000324-000 – (HP StorageWorks HA-Fabric Manager Server Installation Guide)

- AA-RU5JA-TE – (HP StorageWorks Director and Edge Switch Glossary)
- Firmware
 - HPQ_HAF_v05.01.00-24.bin – (HP StorageWorks edge switch preloaded Firmware)
 - HPQ_HAF_v05.02.00-13.bin – (HP StorageWorks edge switch Firmware)
 - firmwareupdate.txt – (Instructions for updating Firmware)
- Acrobat
 - RP505ENU.EXE – (Windows installation file for Acrobat Reader 5.0 with Search)

Supported Configurations

Operation of multiple switches in a fabric topology is subject to the following topology limits. Consider the impact of these limits when planning the fabric.

Note: For more information about planning the fabric, refer to *HP StorageWorks SAN High Availability Planning Guide*.

- **Fabric Elements** – Each fabric element is defined by a unique domain ID that ranges between 1 and 31; therefore, the theoretical limit of interconnected switches in a single fabric is 31. The supported limit of interconnected switches in a single fabric is 24. Because this number is subject to change, contact your HP authorized service representative for the current number of interconnected switches supported in a single fabric.
- **Inhomogeneous fabric** – To determine if interoperability is supported for a product, or if restrictions apply, refer to the product publications, or contact your HP authorized service representative.
- **Number of Interswitch Links (ISLs)** – The maximum supported number of ISLs for edge switches is all available switch ports. For redundancy, at least two ISLs should connect any two switch-class fabric elements. Because this number is subject to change, contact your HP authorized service representative for the current number of ISLs supported per switch.

- **Hop Count** – The Fibre Channel theoretical limit of ISL connections traversed (hop count) in a single path through a fabric is 7. The maximum supported hop count in a single path through a fabric is 3. Because this number is subject to change, contact your HP authorized service representative for the current hop count supported by a single fabric path.

Note: The hop count is equal to the number of ISL connections traversed in a single path, not the total number of ISL connections between devices.

Cable Requirements

Note: Please note that optical cables for the Edge Switch 2/24 and Edge Switch 2/32 must be ordered separately.

For cables measuring up to 500 meters (1 Gbps) or 300 meters (2 Gbps), use multi-mode Fibre Channel cables. For longer cables, use single-mode Fibre Channel cables.

Multi-mode optical cables are connected to short-wave optical transceiver modules in a switch. Single-mode optical cables are connected to long-wave optical transceiver modules in a switch. Multi-mode cables should use 50/125 optical fibers, and single-mode cables typically use 9/125 optical fibers for distances up to 10 km.

Verify that connectors interfacing with the Edge Switch 2/24 and Edge Switch 2/32 use LC Duplex connectors with a PC finish. In addition, the connector at the opposite end of the cable must use either LC or SC type, depending on the requirements of the connected device.

Important Information

This section describes important information related to the Edge Switch 2/24 and Edge Switch 2/32.

HAFM and Firmware Version Compatibility

[Table 1](#) lists the minimum version of HAFM that can run with the various versions of firmware for the directors and edge switches.

Table 1: HAFM and Firmware Compatibility

Firmware Version	HAFM Version (Minimum)
01.01.02	04.00.01 (HP EFCM)
01.02.02-06	04.01.02-14 (SDCM)
01.03.00-35	04.02.00-40 (HP EFCM)
01.04.00-01	04.02.00-40 (SDCM)
02.00.00-33	06.00.00-45 (HP EFCM)
02.00.02-01	06.00.02-06
04.01.02-04	06.03.01-05
05.01.00-24	07.01.00-09 (Notebook Server)
05.01.00-24	07.02.00-09 (1U Appliance)
05.02.00-13	07.01.00-09 (Notebook Server)
05.02.00-13	07.02.00-09 (1U Appliance)

Upgrading from an Earlier Version of Firmware

Upgrading to firmware Version 05.02.00-13 is nondisruptive to attached devices. The edge switch or director is not required to be offline before performing an upgrade operation. Limitations to upgrades are clearly identified if there are any limitations to performing the operation.

Before upgrading firmware, it is highly recommended that you back up the edge switch or director configuration in the event that a failure should occur. Refer to the switch or director *Product Manager* user guide for more information. Embedded Web Server (EWS) also provides an option to print or save product configuration to a file. Refer to the *HP StorageWorks Embedded Web Server User Guide* for more information.

All products must be running firmware Version 04.00.00 or higher before upgrading to Version 05.02.00-13.

All products must be running Version 02.00.00 or higher before upgrading to Version 04.01.02-04. Upgrading to Version 04.01.02-04 from Version 02.00.00 or higher is nondisruptive to attached devices.

Firmware that predates the 01.03.00 or 01.04.00 firmware release must first be upgraded to a 01.03.xx or 01.04.xx firmware version, and then upgraded to Version 02.00.00 or higher, before the upgrade to Version 04.01.02-04 can be completed.

A small number of early-shipped Surestore Director FC-64 units may receive one of the following messages when they upgrade to Firmware V05.02.00-13:

- HAFM – Firmware cannot be loaded due to insufficient CTP memory.
- EWS – File System Error: Insufficient memory for new firmware version.

This would only occur in certain units with CTP cards. Units with CTP2 cards will not have this issue.

If you get one of these messages during the upgrade, the firmware upgrade failed, but the unit continues working with the existing firmware without an interruption in service. The upgrade process checks for sufficient memory before activating the new Firmware image. The Firmware upgrade will not complete without sufficient memory. Please contact HP customer support if you receive this message.

Considerations for Downgrading the Version of Firmware

Directors and edge switches are not required to be offline before performing a firmware downgrade operation. Limitations to downgrades are clearly identified if there are any limitations to performing the operation.

Before downgrading firmware, it is highly recommended that you back up the edge switch or director configuration in the event that a failure should occur. Refer to the switch or director *Product Manager* user guide for more information. Embedded Web Server (EWS) also provides an option to print or save product configuration to a file. Refer to the *HP StorageWorks Embedded Web Server User Guide* for more information.

Downgrading directly to a version prior to 04.00.00 from Version 05.02.00-13 is not allowed. To downgrade to a version before 04.00.00, you must first downgrade to version 04.YY.ZZ.

Note: The Director 2/140 and Edge Switch 2/24 cannot be downgraded below version 04.01.00.

Downgrading directly to a version prior to 02.00.00 from version 04.YY.ZZ is not allowed. To downgrade to a version before 02.00.00, you must first downgrade to version 02.YY.ZZ.

Firmware downgrades should not be performed using EWS and Microsoft® Internet Explorer version 5.00.3315.1000x. If this operation is performed, the download operation may not complete and may eventually time-out leaving the switch with the previous version of firmware.

NVRAM Validation Errors

Firmware Version 05.02.00-13 contains an enhancement that eliminates outages in certain types of NVRAM failures. In Version 05.01.00-24, when the NVRAM validation routine detects an error in the configuration data, it faults the processor. On director products this results in a failover to the redundant CTP card, with no interruption of Fibre Channel service. On switch products with no redundant CTP, the processor IPLs and resets the configuration to factory defaults.

Firmware Version 05.02.00-13 implements a new correction algorithm, that allows the switch to automatically recover from errors detected during system runtime. If an error is detected during the validation process, the firmware uses the configuration data stored in DRAM to refresh NVRAM. When this occurs, the processor does not fault, no IPL occurs, and an event is logged. Fibre Channel operation is not impacted.

If a validation error is discovered on the same CTP twice during a one-hour period on a director product, the CTP will fault and fail over to the backup. If multiple errors within an hour occur on a switch product, the unit will fault and be reset to factory defaults.

Upgrading Firmware on an Edge Switch

An issue has been identified in release 04.xx.xx if the contents of the nonvolatile storage (NVRAM) on the CTP become corrupted. Once the configuration has been loaded, this corruption is not detected until an IPL/IML, power cycle, or Firmware code load. If the NVRAM in the CTP has corrupted contents, the firmware load can cause the configuration to reset to factory defaults, which could cause a system outage.

Edge Switch products already running Version 05.01.00 or later, continually validate the NVRAM configuration, so risk of an outage is extremely low. For Edge Switch products running an earlier version of firmware, the risk of an outage increases due to the NVRAM issue. If an outage compromises system integrity, HP recommends that the edge switch firmware upgrade be a scheduled maintenance action that anticipates the failure of switch connectivity. This issue is corrected with Version 05.02.00-13 firmware.

1. Upgrade HAFM software on the HAFM server/appliance to Version 07.01.00 (minimum).
2. Download Firmware V05.02.00-13 using the **Firmware Library** option under the Product Manager **Maintenance** menu.
3. Back up the edge switch configuration using the **Backup & Restore Configuration** option under the Product Manager **Maintenance** menu.
4. Upgrade the Firmware to Version 05.02.00-13 on each edge switch using the **Send** option on the Firmware Library dialog box.

HAFM Upgrade Required for Firmware Version 05.02.00-13

If you are using HAFM to manage the Director 2/140, Director 2/64, Edge Switch 2/32, Edge Switch 2/24, and/or Edge Switch 2/16, and they are running firmware Version 05.02.00-13, you need to upgrade HAFM to version 07.01.00-09 (minimum). For more information on upgrading software versions, refer to the *HP StorageWorks HA-Fabric Manager User Guide*. The features of this software version are detailed in the accompanying manuals listed in section “[Other Edge Switch Documentation](#)”.

Open Trunking Feature is Not Available in Current Release

The Open Trunking feature is not available in Firmware Version 05.02.00-13. Open Trunking feature will be available in a future release.

Zoning is Disabled by Default

The default zone on the Edge Switch 2/24 and the Edge Switch 2/32 is disabled by default. Zoning must be configured in order for any devices connected to the edge switches to communicate.

Some IP Addresses must be Avoided

If you use HAFM to manage M-Series Fabric directors and edge switches, when you select IP addresses for edge switches, directors, and for the HAFM server/appliance, do not use IP addresses in the following range:

- 192.168.0.0 through 192.168.0.255—This subnet is used internally to the HAFM server/appliance. Using an IP address in this range causes the call-home feature to function incorrectly.

Hard Zoning

Hard Zoning is a security enhancement introduced in firmware version 05.01.00-24 that prevents ports from accessing devices outside their zones. Hard Zoning is enabled by default when using firmware version 05.01.00-24 or greater and cannot be disabled. All HP-approved host bus adapters (HBAs) limit access to devices within their zones, so you will not see a change in fabric behavior unless you are using nonstandard HBAs. Hard Zoning improves security against intruders that load nonstandard HBA drivers.

Hard Zoning is compatible with legacy zone definitions, including World Wide Name (WWN) and port zoning. You can use your existing zones and zone sets without any changes. There are no changes to the zoning interfaces, so you do not need to modify your zone management practice, documentation, or retrain Storage Area Network (SAN) administrators.

Hard Zoning controls access at the ingress port. When a port attempts to send a frame to a destination outside its zones, the frame is blocked. A Class 2 frame will be fabric rejected, and a Class 3 frame will be dropped.

Zoning Change RSCN Control

Normally, when a zone set is activated, a fabric format domain Register State Change Notification (RSCN) is sent to all devices in the fabric. With firmware Version 05.01.00-24 or later, you can disable these RSCNs from being sent. This is done using the **Suppress RSCNs on zone set activations** check box on the Configure Switch Parameters dialog box.

This feature significantly changes the normal behavior of the fabric. Devices will have no warning when zones change and will not automatically update their zoning information. The ability to suppress RSCNs is disabled (check box is not selected) by default. This feature can be configured through HA-Fabric Manager (HAFM), Embedded Web Server (EWS), and the Command Line Interface (CLI).

Embedded Web Server (EWS) Changes

With firmware version 05.01.00-24 or later, the EWS now provides support for configuration of Port Binding. The zoning interface has also been enhanced to allow you to easily add members to a zone that are not directly attached to the locally managed switch. You are presented with a list of all devices that are logged in to the fabric. You can select these devices for addition to a zone.

Command Line Interface (CLI) Changes

CLI has been enhanced to provide the following benefits:

- Access to symbolic name information in the name server database.
- **Counter Threshold Alerts (CTA)**—Used to configure limits and alerts for any of the supported port statistics fields. You can configure alerts for individual ports, groups of ports, or various port types, based on user-specified counter value exceeded over a specified time duration.

Note: The CTA configuration is cleared upon downgrade to firmware below 05.01.00.

SNMP Changes

Firmware Version 05.02.00-13 supports the following management information base (MIB) versions on all products:

- Fabric Element MIB: V1.1
- MIB-II MIB: RFC-1213, non-implemented sections are not included
- FCEOS MIB: V2.0
- SNMP Framework MIB: RFC-2271 (1997/09/30)
- FA MIB: V3.1

Zoning Limitations

Firmware Version 05.02.00-13 includes the ability to configure large zone sets, including up to 1024 zones and 1024 end ports in a single zone set. [Table 2](#) shows the supported limits for the edge switches and directors.

Note: Hard Zoning will be enforced upon firmware initialization. Devices not conforming to zoning rules will be restricted to their assigned zones.

Table 2: Zoning Parameters Supported Limits

Zoning Parameter	Maximum Value
Number of end ports	1024
Unique zone members	1024
Members per zone	1024
Zones	1024
Number of zone sets	64
Maximum devices supported	1024

Note: The supported number of zones is based on a zone name with a maximum of 32 characters. On all edge switches and directors except the Director 2/140, the maximum number of zones decreases if full 64 character names are used. The supported limits are based on two members per zone.

Zone set sizes are affected by the number of zones in the zone set, the length of each zone name, the number of members in each zone, and the Interoperability mode of the fabric. Please consult with HP Professional Services or your support representative if you have questions regarding specific zone set configurations.

Using the Same Firmware

All switches and directors in the same fabric should have the same FW level installed—whether 1 Gbps or 2 Gbps capable.

The only exception is the recently released HP StorageWorks Edge Switch 2/12, which currently has an interim firmware version specific for the Edge Switch 2/12, Version 05.05.00-12. This firmware cannot be used for any other edge switch or director. This interim version is compatible with firmware Versions 05.01.00-24 and 05.02.00-13 used for the rest of the M-Series Fabric products. The next major firmware release will be a common firmware version for all the M-Series Fabric products.

Reinstalling Feature Licenses

Feature Licenses (or keys) must be reinstalled after performing a factory reset on an edge switch to regain use of the licensed features (e.g., SANtegrity Binding).

Disconnecting the Null Modem Cable

Always log out and disconnect the Null Modem cable from the serial maintenance port when not in use or when the switch is reset.

CTP Controls Port Lights

Port lights on the edge switch and director products are controlled by the CTP functionality. Certain activities such as FW updates, IPLing the CTP, or switching over to the backup CTP (Director) can cause these port lights to extinguish momentarily until control is reasserted by the CTP. The actual FC traffic is not affected during these times.

Known Issues

This section describes the known issues related to the Edge Switch 2/24 and Edge Switch 2/32.

Embedded Web Server access to modify zones is limited to first 255 zones

If you have an active zone set of greater than 255 zones, you will not be able to access the zones past the 255th zone using the Embedded Web Server (EWS). The higher number zone names are listed, but when accessed to modify the zone (for example, the zone that would be numbered “n”), you will get the zone member list for the (n-255) zone. This will be corrected in a future firmware release.

Workaround

Using the HAFM server to manage directors and edge switches will allow you to modify zones in zone sets with greater than 255 zones.

SNMP trap reports incorrect FRU position

When an SNMP trap is sent and reports a FRU position number, the reported number is one greater than the actual FRU position that caused the SNMP trap to be issued.

Workaround

None.

Certain Unauthorized Devices may Increase Response Time for Fabric Operations Under Specific Conditions with the Edge Switch 2/24

When **Port Binding** is enabled, unauthorized devices (devices that are not set up by the **Port Binding**) with older technology can transmit numerous fabric login (FLOGI) requests, which are rejected by the Edge Switch 2/24. Processing these exchanges may increase fabric response times for activities such as fabric builds and valid FLOGI response time for other ports.

Workaround

Remove the unauthorized device, change the **Port Binding WWN** (if this device should be authorized), or alternatively disable **Port Binding**.

CTP Events for Edge Switch 2/24 Show Incorrect FRU Number

Should a CTP event occur in an Edge Switch 2/24, the event log may show “CTP-24” instead of “CTP-0”. There is only one CTP in the Edge Switch 2/24, so there should be no question as to what FRU is exhibiting the event.

HSG80 Transparent Mode Not Supported with IBM AIX

Use of an HSG80 with IBM AIX is restricted to operating the HSG80 in Multibus mode with the Edge Switch 2/24 and Edge Switch 2/32. Transparent mode is not supported at this time.

Workaround

None.

HSG80 Transparent Mode Not Recommended with Controller in SCSI-3 Mode with HP-UX Operating Systems

Due to an issue with non-existent duplicate LUNs being displayed with the HP-UX operating systems, the HSG80 controller is restricted to SCSI-2 mode of operation when set to Transparent failover mode. SCSI-3 mode of operation in Multibus failover mode is fully supported with the use of Secure Path software, Version 3.0 or later versions.

Workaround

None.

ISL Disconnect Causes NOS Error with the OpenVMS Operating Systems

When an ISL connection is physically removed between directors or switches, the Fibre Channel Adapter model FCA2354 transmits a Not Operational Sequence (NOS) error. This is observed as an entry in the HAFM server Link Incident log for the port in which the FCA2354 is attached. The director's Hardware View also displays a yellow triangle icon over the port that detected this incident. The fabric operation or data movement is not disrupted by these incidents, which can be cleared using the following procedure.

Workaround

Use these steps to clear the incident alerts.

1. At the **HAFM Hardware View**, click the port module to open the **Port Card View**.
2. Right click on the port with the yellow triangle icon, and choose **Clear Link Incident Alert(s)**.

Support for Speed Auto-Negotiate

Auto-negotiate is supported. However, HP recommends that the port speed for E_Ports (for Interswitch Links, or ISLs) be set to a specific port speed (1Gb/sec or 2Gb/sec, as appropriate for the speed of the directors or edge switches being connected) instead of to Negotiate. Using a specific port speed decreases the time for a fabric build in response to some perturbation event in the fabric. Similarly, setting a specific port speed for N_Ports also decreases fabric build time. However, setting a specific port speed for N_Ports is not required.

There are a few older HBA devices that do not always succeed in logging in to a switch port when the port speed is set for auto-negotiate.

Workaround

If an older HBA is found to have difficulty logging into a switch port that has its port speed configured as **Negotiate**, configure that port speed to **1Gb/sec** or **2Gb/sec** according to the operation speed of the HBA connected to that port.

Ports May Accumulate Spurious Events

A port may accumulate *Invalid transmission word* and *Bit-Error Threshold Link Incident* events when a transceiver is poorly seated resulting in a poor ground connection.

Workaround

Reseating the optical transceiver will correct the problem.

Firmware Downloaded to the Edge Switch 2/24 Using HAFM Can Occasionally Time Out

Firmware downloaded to the edge switch 2/24 using HAFM can occasionally time out due to an internal task priority issue which has been resolved and will be fixed in the next major firmware release.

Workaround

Firmware downloads can be performed via the Embedded Web Server.

Adding a Defective ISL Connection May Cause all ISLs to Segment Between the Two Switches or Directors

Adding a defective ISL (due to defective cable, optics, or port) between edge switches or directors may result in all the ISLs between the edge switches or directors becoming segmented.

Workaround

Should the ISLs between two edge switches or directors become segmented as a result of adding an ISL between them, disconnect the added ISL, allow the fabric to be rebuilt and then troubleshoot the problematic ISL. This can be avoided by using known good cables and performing port diagnostic tests before connecting an ISL.

Possible Switch Reset After Power Failure or Power Off Sequence

In extremely rare instances, after a power failure or power off sequence, an edge switch or director configuration may be reset to factory default settings. This will be evident when the *HAFM* application is unable to communicate with the edge switch or director after being powered on. This condition occurs because the IP address assigned to the edge switch or director has been reset to the factory default value (10.1.1.10).

Workaround

Should this condition occur, the configuration of the edge switch or director must be restored, and the IP address must be restored. Also, all licensed features will need to be reactivated by entering the license keys again.

Erroneous Error Message When No Firmware File Selected

During a firmware upgrade, if the **Download firmware file from** field is left blank, or erroneous text is entered in the field, the following error message displays when you click **Send and Load Firmware**:

System File Error Firmware Successfully Loaded

Although the error message indicates that the firmware has been successfully loaded, no changes were actually made to the switch or its firmware.

Workaround

Perform the firmware upgrade again, ensuring that the **Download firmware from file** field contains a valid file name.

A Device Cannot Send Frames to Itself After the Active Zone Set Is Deactivated

With the introduction of Hard Zoning in firmware 05.xx.xx, a device can no longer send frames to itself after the active zone set (of which it is a member) is deactivated.

Workaround

Perform a block/unblock to the port of the device experiencing this issue to cause the device to log back in to the fabric and allow the device to send frames to itself.